# Computing Technology Stage 5 (Year 9) – sample assessment task 1 notification



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## Task description

**Type of task**:

* Part A: conversations about data – interview questions
* Part B: careers research

**Outcomes being assessed**:

* understands how innovation, enterprise and automation have inspired the evolution of computing technology **CT5-EVL-01**
* communicates ideas, processes and solutions using appropriate media **CT5-COM-01**

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**Suggested weighting:** 15%

* Explore the growing importance of data analysis in our lives.
* Investigate the careers of a data analyst.

Part A: interview a family member, friend, teacher, coach, manager or employer to complete the questionnaire on conversations about data.

Part B: research the role and career of a data analyst.

## Submission details

Part A: the completed questionnaire is to be submitted and delivered digitally as a [Microsoft](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/108) or [Google](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/89) Form.

Part B: the completed research task can be submitted digitally using a template from the Digital Learning Selector or as a document.

## Steps to success

Table 1 – assessment preparation schedule

|  |  |
| --- | --- |
| Steps | What I need to do/when I need to do it |
| Part A:Identify someone to interview | * Create a short list of 3 possible interviewees or participants. In consultation with the teacher, choose the most suitable.
 |
| Schedule a survey to take place | * Contact the interviewees to set a time and determine interviewee accessibility requirements.
 |
| Ask the questions | * Examine the sample questions that have been developed.
* Clarify any of the questions and rework these samples as required.
 |
| Create an online survey | * Develop and create an online survey for the participant to use.
* Share the link to the prepared online survey form with the teacher.
* Share the link to the completed online survey with the teacher.
 |
| Part B:Investigate different data analyst fields and famous analysts | * Research various careers and fields and select an analyst to delve deeply into.
 |
| Complete research on one data analyst and organise your report to capture the unique skills and work they complete | * Who they are
* What they do and what datasets they analyse and visualise
* When and where they work
* Why they analyse the data and who they provide the information to
* How they analyse and visualise the data into information
 |

## What is the teacher looking for?

Students are to record and manage an interviewee about how they use data in their career. Students develop a survey with key questions and use a digital survey to record the participants responses.

This task will require students to find an appropriate person to interview. The interviewee will share their knowledge and understanding of how innovation, enterprise and automation have inspired the evolution of computing technology.

Students will investigate data analysts in a field that captures their interest. Developing a research report on the career and data analyst will assist students in understanding the focus area and learning how to communicate ideas, processes and solutions using appropriate media.

## Marking guidelines

Table 2 – assessment marking guidelines

|  |  |
| --- | --- |
| Grade | Marking guideline descriptors |
| A | * The student demonstrates an extensive understanding of the influence of enterprise, innovation and automation on the evolution of computing technology.
* The student selects relevant data, media and processes to effectively communicate information in a range of contexts.
 |
| B | * The student demonstrates a thorough understanding of the influence of enterprise, innovation and automation on the evolution of computing technology.
* The student selects relevant data, media and processes to communicate appropriate information in a range of contexts.
 |
| C | * The student demonstrates a sound understanding of the influence of enterprise, innovation and automation on the evolution of computing technology.
* The student selects appropriate data, media and processes to communicate information in a range of contexts.
 |
| D | * The student demonstrates a basic understanding of the influence of enterprise and innovation on the evolution of computing technology.
* The student uses data to communicate basic information.
 |
| E | * The student identifies the evolution of, and/or innovations in, computing technology.
* The student uses data to communicate information in a very limited way.
 |

## Student-facing rubric

Table – rubric for assessment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Criteria | Limited | Basic | Sound | High | Outstanding |
| Criteria 1Survey collection | Student provides an incomplete survey that incorrectly captures the interviewed participants’ responses. | Student provides an incomplete survey that captures some of the participants’ responses.  | Student compiles and presents a well organised survey. The survey captures the participants’ responses. The survey is well made and presented. | Student produces a well-organised and sequenced survey. The survey accurately captures the participants’ responses. The survey is professionally made and presented. | Student produces a well-organised and sequenced survey that demonstrates their iterative approach. The survey extensively and accurately captures the participants’ responses. The survey is professionally made and presented, including the use of a digital survey tool. |
| Criteria 2Data analyst research | Student provides limited or incorrect understanding of the role of a data analyst. | Student identifies some aspects of the role of a data analyst. | Student provides accurate knowledge and detailed research into the role of a data analyst. | Student correctly describes the use of data, necessary datasets, visualisation methods for the chosen data analyst and the systems they use. | Student provides an extensive and detailed explanation of data, necessary datasets, visualisation methods for the chosen data analyst and the systems they use. |

## Student support material

### Part A: conversations about data

**Note**: the last 5 of these questions could be used to inform the design for a data analysis project for this unit. Answers should be collected digitally via the use of forms.

1. Do you use data at home, in your job, industry or community?
2. Where do you see data being collected?
3. What data do you source? (Sourced data refers to datasets already collected.)
4. What questions do you ask of the data?
5. Which data analysis tools do you use? (Interviewers may wish to prompt with: to organise, describe, explore, search, sort and filter the data.)
6. How does visualising the data help?
7. What information does the analysis of data give you?
8. How does the information help you make decisions or solve problems?

Additional questions can include:

1. Are there problems you would like to solve?
2. Are there questions you would like answered?
3. Are there questions that have been raised by analysing the data?
4. Are there decisions that data could help you make?
5. Are there better visualisations you’d like to see?

### Part B: careers research

Students use [keywords](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/565) to research careers in analysing data in a field of their interest.

Examples include:

* Casey Briggs and Covid data analysis
* Antony Green and election data analysis
* Doug Kors and football analysis
* Giorgia Lupi and Stefanie Posavec from Dear Data
* Data journalists
* Indigenous national park rangers
* [Indigenous Languages dictionary database](https://aiatsis.gov.au/research/current-projects/indigenous-languages-preservation-dictionaries-project) officer
* Scientists or citizen scientists: flora, fauna.

Students provide a description of their chosen analyst including:

* who they are
* what they do and what datasets they analyse and visualise
* when and where they work
* why they analyse the data and who they provide the information to
* how they analyse and visualise the data into information.

The [Who? What? When? Where? Why? and How?](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/599) slide on the list of graphic organisers can be used as a scaffold.

## Additional information

This resource has been developed to assist teachers in NSW Department of Education schools to create learning that is contextualised to their classroom. It can be used as a basis for the teacher’s own program, assessment, or scope and sequence, or be used as an example of how the new curriculum could be implemented. The resource should be used with timeframes that are created by the teacher to meet the overall schedules of assessment.

For additional support or advice, contact the TAS curriculum team by emailing TAS@det.nsw.edu.au.

### Assessment advice

Assessment is a powerful tool to measure student learning and plan for the next stages in the learning process. Some considerations in using parts of this assessment notification are:

* Consider the skills, knowledge, and understanding students need to complete the task, and see where there are opportunities for them to refine these through ongoing feedback in the learning sequences associated with the assessment task.
* Ensure the language and readability of the task presents an appropriate challenge for the students the task is being used with. Direct, plain English will allow the greatest number of students to access the task independently.
* Marking guidelines should directly reflect the success criteria and outcomes of the task and align with appropriate levels of achievement for the relevant stage.
* When constructing or adjusting the marking guidelines and/or rubric, try to keep active verbs like ‘do’, ‘say’, ‘make’, or ‘write’ in mind to measure student performance at each level. This will help to avoid subjective language.

### Assessment as a learning opportunity

Assessment can provide ways for students to use formal and informal feedback and self-assessment to help them understand where they are in their learning, where they are going, and how they are going to get there. It is essential that students receive feedback on their performance in the task and have opportunity to clarify and plan the next steps in learning.

* Clear and explicit marking rubrics can support effective self-assessment in relation to the learning intentions and success criteria assisting students to become owners of their own learning. Students can then build their capacity for individual goal setting, which includes students asking questions such as, ‘What do I need to improve?’ and ‘What is my next step?’ ([CESE Growth goals setting – what works best in practice](https://education.nsw.gov.au/about-us/educational-data/cese/publications/practical-guides-for-educators/growth-goal-setting)).
* Greater learning gains may be made when teachers provide explicit descriptive feedback to students in a timely manner. This feedback supports students in forming their learning goals as well as helping the teacher to plan for the next iteration of the teaching and learning cycle.

#### Differentiation advice

Differentiated learning can be enabled by differentiating the assessment approach to content, process, and product. Reasonable adjustments of assessment for students with disability is a legal requirement under the [*Disability Standards for Education 2005* (Cth)](https://www.education.gov.au/disability-standards-education-2005). For students with a disability, adjustment in assessment tasks should be made through the [Collaborative curriculum planning](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/diversity-in-learning/special-education/collaborative-curriculum-planning) process. For more information on differentiation, go to [Differentiating learning](https://education.nsw.gov.au/teaching-and-learning/professional-learning/teacher-quality-and-accreditation/strong-start-great-teachers/refining-practice/differentiating-learning) and [Differentiation](https://education.nsw.gov.au/campaigns/inclusive-practice-hub/primary-school/teaching-strategies/differentiation). When using this resource, teachers can use a range of [adjustments](https://education.nsw.gov.au/teaching-and-learning/disability-learning-and-support/personalised-support-for-learning/adjustments-to-teaching-and-learning) to ensure a personalised approach to student learning.

* Some common adjustments are available through the [Inclusive Practice hub assessment and reporting](https://education.nsw.gov.au/campaigns/inclusive-practice-hub/all-resources/secondary-resources/other-pdf-resources/nesa-assessment-and-reporting) site.
* The [HPGE Differentiation Adjustment Tool](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/implement/differentiation-adjustment-strategies) and [Differentiation Package](https://schoolsnsw.sharepoint.com/sites/HPGEHub/SitePages/Home.aspx#first-time-access-to-hpge-resources) can assist teachers to decide how to provide extension and additional challenge for High Potential and Gifted (HPG) students.

The steps below may be useful to consider when creating access opportunities for all students:

* remove unnecessary words or images
* simplify any tricky words or make a glossary of subject specific words
* reduce the lexical density of the steps and use student friendly language
* chunk large passages of reading or offer alternate ways of representing the information, such as a visual
* make the task description a checklist with numbered steps
* limit options and/or reduce the number of choices students need to make independently.

### Support and alignment

**Resource evaluation and support**: all curriculum resources are prepared through a rigorous process. Resources are periodically reviewed as part of our ongoing evaluation plan to ensure currency, relevance and effectiveness. For additional support or advice, contact the TAS curriculum team by emailing TAS@det.nsw.edu.au.

**Alignment to system priorities and/or needs:** [School Excellence Policy](https://education.nsw.gov.au/policy-library/policies/pd-2016-0468), [School Success Model.](https://education.nsw.gov.au/public-schools/school-success-model/school-success-model-explained)

**Alignment to the School Excellence Framework**: this resource supports the [School Excellence Framework](https://education.nsw.gov.au/teaching-and-learning/school-excellence-and-accountability/sef-evidence-guide/resources/about-sef) element of assessment (formative assessment, summative assessment, student engagement).

**Alignment to Australian Professional Teaching Standards**: this resource supports teachers to address [Australian Professional Teaching Standards](https://educationstandards.nsw.edu.au/wps/portal/nesa/teacher-accreditation/meeting-requirements/the-standards/proficient-teacher) 5.1.2, 5.4.2.

**Consulted with**: Curriculum and Reform, Inclusive Education, Multicultural Education, Aboriginal Outcomes and Partnerships and subject matter experts

**NSW Syllabus**: Computing Technology 7–10

**Syllabus outcomes**: CT5-EVL-01, CT5-COM-01

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**Resource**: Assessment task notification

**Related resources**: further resources to support Computing Technology Stage 5 can be found on the [TAS curriculum page](https://education.nsw.gov.au/teaching-and-learning/curriculum/tas).

**Professional learning**: relevant professional learning is available through the TAS statewide staffroom.

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## Evidence base

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